REMARKS

In view of the above amendments and the following remarks, reconsideration of the objections and rejections contained in the Office Action of December 8, 2004 is respectfully requested.

The Examiner objected to the disclosure due to various informalities. In particular, the Examiner asserted that the disclosure must include a reference to the foreign priority documents, and suggested a new Title describing the elected invention. In view of these objections, and in order to make various editorial corrections throughout the disclosure, the entire specification and abstract have now been reviewed and revised as indicated above. In particular, although there is no requirement in the MPEP to provide a reference to priority documents in the disclosure of the invention, the first page of the specification has been amended as suggested by the Examiner to insert such a reference. In addition, the Title has been amended to the Title suggested by the Examiner. None of these changes introduce any new matter into the disclosure. Therefore, the Examiner is respectfully requested to enter these changes, and it is submitted that these changes overcome the Examiner's objections to the disclosure.

In view of the election of October 29, 2004, original claims 2 and 3 were treated in this Office Action. In this regard, the Examiner rejected claim 2 as being anticipated by the Tsutomo reference (JP 11-340030); and rejected claim 3 as being unpatentable over the Tsutomo reference in view of the Herzer reference (USP 6,011,475). However, as indicated above, the original claims have been cancelled and replaced with new claims 4-19. All of the new claims read on the elected invention, and have been drafted so as to clarify the distinctions between the present invention and the prior art. Therefore, for the reasons discussed below, it is respectfully submitted that new claims 4-19 are clearly patentable over the prior art of record.

New independent claim 4 is directed to a method of manufacturing a stator core to be used in a motor excited by a high-frequency current and driven in a magnetic field having a magnetic induction *of no greater than 1.0T*. The method comprises fabricating a stator core of non-oriented electrical steel sheets, heating the stator core to a temperature above a Curie point of the stator core, and cooling the heated stator core while apply a magnetic field thereto at least through a temperature

range from a temperature above the Curie point *to a temperature of 300°C*. The magnetic field has a direction the same as a direction of excitation of a stator of the motor during operation of the motor.

One object of the present invention is to provide a stator core which will improve motor power in motors driven in magnetic fields having a magnetic induction no greater than 1.0T. As illustrated in Figure 1 and described on page 9, lines 7-16 of the original specification, magnetic annealing (i.e., heating a stator core and then applying a magnetic field to the stator core while cooling the heated stator core) provides significantly increased magnetizing force for a magnetic induction of 1.0T or lower, but only minimal advantages higher than a magnetic induction of 1.0T (see also page 8, lines 10-14). Thus, the stator core manufactured as recited in new independent claim 4, including heating the stator core and then cooling the stator core while applying a magnetic field thereto, provides significantly improved magnetic power when incorporated into a motor driven in a magnetic field having a magnetic induction of no greater than 1.0T.

In addition, the magnetic field is applied during cooling of the heated stator core at least through a temperature range from a temperature above the Curie point *to a temperature of 300°C*. As explained on page 10, lines 13-20 of the original specification, domains in the crystals of the stator core reappear during cooling at a temperature just slightly above the Curie point, and become fixed in a certain orientation under the influence of the magnetic field at a temperature of 300°C. Therefore, application of the magnetic field should be maintained until at least a temperature of 300°C in order to ensure that the directions of the domains are not inadvertently moved prior to being fixed in the desired orientation.

The Tsutomu reference discloses a high performance iron core which is heated and then cooled while a magnetic field is applied to the core. However, there are several distinctions between the method disclosed in the Tsutomu reference and the method recited in new independent claim 4. In particular, as explained in the abstract and paragraph [0014] of the Tsutomu reference, the core is designed to be driven in a *magnetic flux density of about 1.5T*. Thus, the Tsutomu reference <u>does not</u> disclose or suggest a stator core to be used in a motor excited by high frequency current and driven in a magnetic field having a magnetic induction *of no greater than 1.0T*. In addition, the Examiner asserted that the Tsutomu reference disclosed applying a magnetic field to a core while cooling the

core at least in a temperature range from a temperature immediately above a Curie point of 750°C "to 100°C," and referred to paragraph 18, line 5 of the Tsutomu reference. However, the Tsutomu reference merely teaches that the core is to be cooled at a *rate of 100°C per hour*, not to a temperature of 100°C. Moreover, the Tsutomu reference does not disclose or even suggest that the magnetic field is applied while cooling a heated stator core at least through a temperature above the Curie point *to a temperature of 300*°C. Therefore, it is submitted that the Tsutomu reference does not disclose or even suggest the invention recited in new independent claim 4.

On page 5 of the Office Action, the Examiner refers to a "'304" reference, although a '304 reference was not applied in the Office Action. In any event, it appears that the Examiner is applying a secondary reference (the Herzer reference) as teaching a grain size of 100 micrometers or greater at the time of applying a magnetic field. Although the Applicants do not acquiesce to the Examiner's position, it is nonetheless submitted that the Herzer reference also does not disclose or suggest the manufacture of a stator core to be used in a motor driven in a magnetic field having a magnetic induction of *no greater than 1.0T*, and does not disclose or suggest cooling a heated stator core while applying a magnetic field at least through a temperature range from a temperature above a Curie point *to a temperature of 300°C*. Therefore, one of ordinary skill in the art would not be motivated by the Herzer reference so as to modify the Tsutomu reference in order to obtain the invention recited in new independent claim 4. Accordingly, it is respectfully submitted that new independent claim 4 and the claims that depend therefrom are clearly patentable over the prior art of record.

New independent claim 12 is directed to a method that comprises manufacturing a stator core as recited in new independent claim 4, assembling the motor including the stator core, and exciting the motor using a high-frequency current so as to drive the motor in a magnetic field having a magnetic induction of no greater than 1.0T. Therefore, for the reasons discussed above with respect to new independent claim 4, it is respectfully submitted that new independent claim 12 is also clearly patentable over the prior art applied by the Examiner.

In view of the above amendments and remarks, it is submitted that the present application is now in condition for allowance. However, if the Examiner should have any comments or suggestions to help speed the prosecution of this application, the Examiner is requested to contact the Applicant's undersigned representative.

Respectfully submitted,

Hiromichi KOSHIISHI et al.

By:_____

W. Douglas Hahm
Registration No. 44,142
Attorney for Applicants

WDH/gtg
Washington, D.C. 20006-1021
Telephone (202) 721-8200
Facsimile (202) 721-8250
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